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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,955	10/04/2004	Yukihiko Minamida	040497	7477

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EXAMINER	
AFTERGUT, JEFF H	

ART UNIT	PAPER NUMBER
1733	

MAIL DATE	DELIVERY MODE
08/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/508,955	MINAMIDA ET AL.	
	Examiner	Art Unit	
	Jeff H. Aftergut	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 15-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 5, 6, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Nichol for the same reasons as expressed in the Office action dated 3-23-07, paragraph 2.

With respect to the new limitations presented, the applicant is advised that the reference to Nichol suggested that those skilled in the art at the time the invention was made would have rotated the roller in the same direction as the direction of travel the article was being conveyed through the system, see column 2, lines 62-column 3, line 4. While it is not the preferred direction of rotation for the coating roller, the reference to Nichol clearly expressed that it was known to rotate the roller in the same direction as that of the material being worked upon. It should additionally be noted that the material being worked upon is given no weight in the apparatus claims and thus the fact that the material being coated was a wood substrate is of no patentable weight to the apparatus at hand. The applicant is additionally advised that if the mechanism was capable of heating above 130 degrees that the device was clearly capable of heating the roller to 130 degrees C. Additionally regarding new claim 17, the reference taught the use of a back up roller in the operation. Regarding claim 18, the adhesive itself is not part of the apparatus but rather is material being worked upon and is given no weight in relation to the apparatus claims as presented.

3. Claims 5, 6, 10, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ballard for the same reasons as expressed in paragraph 3 of the Office action dated 3-23-07.

With respect to the new limitations presented, the applicant is advised that the reference to Ballard suggested that those skilled in the art at the time the invention was made would have rotated the roller in the same direction as the direction of travel the article was being conveyed through the system, see the Figure for the rotation direction of the roller and column 4, lines 42-47. It should additionally be noted that the material being worked upon is given no weight in the apparatus claims and thus the fact that the material being coated was a wood substrate is of no patentable weight to the apparatus at hand. The applicant is additionally advised that if the mechanism was capable of heating above 130 degrees that the device was clearly capable of heating the roller to 130 degrees C. Regarding claim 18, the adhesive itself is not part of the apparatus but rather is material being worked upon and is given no weight in relation to the apparatus claims as presented.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-12 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Nichol and Nagata et al (newly cited).

The admitted prior art and Nichol are cited for the same reasons as previously given in paragraph 6 of the Office action dated 3-23-07. The admitted prior suggested

that the use of a hot melt adhesive was known in the operation wherein the hot melt adhesives known in the art included reactive polyurethane hot melt adhesives as well as ethylene vinyl acetate hot melt adhesives, see page 3, lines 3-6 for example. The admitted prior art taught that it was known to utilize these hot melt adhesives to coat a wood surface to join a decorative laminate thereto. The coating of a hot melt adhesive upon a substrate with a roll applicator was known wherein the roll was operated at a rate which was 25 % different than the rate at which the material was fed through the application device. The use of the same to apply a hot melt adhesive in order to provide an even and uniform coating of the hot melt would have been obvious in light of the teachings of Nichol. The reference to Nichol admittedly taught the heating of the adhesive material to between 162 and 232 degrees C, however this is clearly a function of the melting point of the specified hot melt adhesive employed in the operation which was a ethylene vinyl acetate type of hot melt. The applicant is advised that the amount of heat applied by the coating device was a function of the type of hot melt being applied and one skilled in the art would have understood that for a reactive polyurethane hot melt adhesive one skilled in the art would have heated the roller to the melting temperature necessary for this type of adhesive material. The references do not expressly state what the viscosity of the adhesive material is in the operation. However as it was a known adhesive material useful for the processing as admitted by the applicant (see above), one would have expected that the reactive hot melt polyurethane adhesive would have had the same properties as that recited as it was the same material being employed. To further evidence that one skilled in the art would have

melted the reactive hot melt adhesive (polyurethane) at a temperature of about 100 degrees C wherein the adhesive exhibited the specified viscosity as claimed and the adhesive was useful for bonding with wood materials, the reference to Nagata et al is cited.

Nagata et al suggested that those skilled in the art would have known that a hot melt adhesive of the reactive polyurethane type included hot melt compounds having a melting point above 100 degrees C and having a viscosity lying between 3200 and 15000 cps as suggested by table 2, column 8, lines 50-55, column 2, lines 1-5, and column 3, lines 24-33. Clearly, one skilled in the art at the time the invention was made would have readily appreciated that the hot melt composition which was a reactive polyurethane hot melt would have had the specified properties as identified in the claims including the specified viscosity and melting point (temperature). One viewing the prior art as a whole would have understood to heat the hot melt to the appropriate processing as disclosed by Nagata et al in order to appropriate apply the adhesive upon the substrates as disclosed as each type of adhesive employed has a different melting temperature (processing temperature). It would have been obvious to one of ordinary skill in the art at the time the invention was made that those utilizing a reactive polyurethane hot melt adhesive to coat a wooden substrate as was known by the admitted prior art would have understood that such an adhesive had the specified properties of viscosity and melting point as identified by Nagata et al wherein the hot melt was useful for adhering to wood wherein one applied the adhesive with a roller

applicator wherein the applicator rotated in the direction of travel of the substrate and at a speed differential of at least 25% as taught by Nichol.

With respect to new claims 15 and 17, note that the material worked upon o is not part of the apparatus and thus the gap defined in the claim is suggested by the reference. Note additionally that Nichol suggested that one employ a back up roller against the applicator to define a gap and that the back up roller assisted in the conveying of the material through the applicator. If there were no pressing against the material (a slight pressure) then the material would not have been conveyed through the coating nip. Too much pressure and the transfer of the adhesive to the material would not take place. Clearly one would have optimized the amount of pressure applied by the back up roller and such would have included provision of a gap clearance within the specified amounts. Regarding claims 16 and 18, note that the reference Nagata taught the specific viscosity as well as melting processing temperature of 100 degrees C.

Response to Arguments

6. Applicant's arguments with respect to claims 1-12 and 15-18 have been considered but are moot in view of the new ground(s) of rejection.

The applicant is advised regarding the use of a wood substrate as it relates to the apparatus that this is material worked upon and the material worked upon in an apparatus claim is given little or no weight and thus the apparatus claims remain rejected for the same reasons as previously presented. Regarding the rotation of the applicator roller, it should be noted that the reference to Nichol expressly stated that the direction of rotation was in fact in the same direction as the feed of the work piece being

coated as pointed out to applicant in the first Office action. Regarding the use of urethane reactive hot melt adhesive, the references to Nichol and Ballard both suggested hot melt adhesive materials. The admitted prior art clearly suggested that those skilled in the art of coating a wooden substrate would have envisioned that various hot melt adhesives would have been suitable including reactive polyurethane hot melt adhesives and ethylene vinyl acetate hot melts. Note that as such hot melts were known and as the references to Ballard and Nichol employed ethylene vinyl acetate hot melts, one skilled in the art would have reasonably expected that reactive urethane hot melt adhesives would have been suitable for treatment of the wood where these adhesives were coated onto the substrate in a like manner to that of the ethylene vinyl acetate adhesives. Only the expected results would have followed.

The applicant addresses the benefits of coating the wooden substrates with the specified roller coating operation, however the reference to Nichol clearly suggested that those skilled in the art would have attained an even and smooth coating using the operation as described therein. Additionally, as to the treatment of the wood surface with these coating techniques, one skilled in the art would have been performed as the application of glue and in particular hot melts to wood surfaces to facilitate their decoration was known in the art as admitted by applicant. As such, one would have desired to apply a smooth and even coating upon the surface, as this is always a desirable result of the application of a coating of adhesive upon a surface and Nichol provided such a process for coating the surface.

It should additionally be noted that applicant did not dispute that the application of plural coatings upon the surface with plural rollers would have been within the purview of the ordinary artisan and as applicant did not dispute that such was conventional in the art, applicant has acquiesced the same. Additionally as discussed in paragraph 6 of the Office action and not disputed by applicant, the use of a nip roller arrangement for feeding the wood through the system was well known and conventional in the art as was the use of a roller coating operation for coating a wooden surface with adhesive prior to decoration and lamination of the decorative material thereto. As applicant did not address this, it is assumed that applicant agrees with the Office interpretations of the same.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
August 13, 2007